

Seattle Permits

— part of a multi-departmental City of Seattle series on getting a permit

High Point Impervious Surface Calculation

October 2004

The Seattle Public Utilities' (SPU) approval of a drainage basin plan for the High Point Redevelopment requires a comprehensive stormwater approach to achieve higher creek protection goals for both flow control and water quality. (Drainage Basin Plan and Report, June 23, 2004).

The approved comprehensive stormwater approach to meet higher creek protection goals will be achieved through additional measures that were recorded with the Plat of High Point Community. These measures included a more natural drainage approach throughout the right-of-way, a stormwater pond that serves the subdivision, and special requirements and allowances for parcels located with the subdivision including downspout dispersal and use of porous pavement to reduce impervious surface coverage.

Because of this integrated approach, compliance for the High Point project has been evaluated at the subdivision scale rather than the parcel scale, provided development and redevelopment within this subdivision occurs according to the drainage covenant and technical standards outlined in the Drainage Basin Plan and Report for purposes of water quality and detention requirements.

A Permit Submittal Chart for Drainage Requirements has been created (see attached) that provides the tabulation for flow control and water quality. The allowable percent impervious surface coverage (%) per parcel lot is identified in the Plat of High Point Community. Likewise, the percent of parent lot roof area that is allowed to be directly piped to the discharge point is noted in said Plat. The use of the Permit Submittal Chart for Drainage Requirements is required to be submitted with the permit documents to the Department of Planning and Development (DPD) for review and approval of a High Point parcel by DPD.

DPD uses this chart as an Impervious Surface Tracking tool to track impervious square footage for the parent lots in the High Point Community by permit and date. Permit data of parent lot number, permit number, date, impervious surface area (square feet), impervious roof area (square feet) and proposed roof area percentage to be piped to discharge point can be entered and updated.

With the attached form completed, DPD will update the cumulative surface and roof area square feet for the parent lot. A map display shows the cumulative allowable impervious surface area square footage percent by parent lot in increasing shades of blue. The cumulative allowable roof area percentage piped to the discharge point by parent lot is in increasing numbers of horizontal lines. If the cumulative impervious surface area square footage is larger than the allowable square footage, the parent lot will be flagged. If the cumulative roof area percentage pipe to the discharge point is larger than the allowable percentage, the parent lot will also be flagged.

For additional information about High Point, see the DPD Site Development website at www.seattle.gov/dpd/sitedev, go to Related Links and click on the "High Point Community Site Drainage Technical Standards" (PDF). See Appendix B, Sheet 23b of the Plat of Highpoint Community for parent lot areas and percentages. (Plat of High Point Community KC Volume 221, Page 4-35 #20040413001567).

Access to Information

Links to electronic versions of DPD **Client Assistance Memos (CAMs), codes and forms** are available on the "Publications" and "Codes" pages of our website at www.seattle.gov/dpd. Paper copies of these documents are available from our Public Resource Center, located on the 20th floor of Seattle Municipal Tower at 700 Fifth Ave. in downtown Seattle, (206) 684-8467.

LEGAL DISCLAIMER: This Client Assistance Memo (CAM) should not be used as a substitute for codes and regulations. The applicant is responsible for compliance with all code and rule requirements, whether or not described in this CAM.

www.seattle.gov/dpd



City of Seattle
Department of Planning & Development

Gregory J. Nickels, Mayor Diane Sugimura, Director

700 5th Avenue, Suite 2000
P.O. Box 34019
Seattle, WA 98124-4019
(206) 684-8600

Plat of High Point Community
Permit Submittal Chart for Drainage Requirements

Undeveloped Lot

DPD No. _____

Block Number	
Parent Lot Number	

Discharge Point and Method of Connection for Roof Downspouts

(A) Designated Discharge Point(s) (from Plat)	
Site drains to the discharge point at 1% slope or greater? (If no, drainage may be piped to PSD (per Section 3 of Site Drainage Technical Standards and Paragraph B on Sheet 23b of the Plat))	
(B) Total Roof Area (sf)	
(C) Allowable Percentage of Roof Area that may be Piped to the Discharge Point (% from plat)	
(D) Proposed Percentage of Roof Area to be Piped to the Discharge Point (%) (round to nearest 5%)	
(E) Selected downspout option(s) (choose from options in Technical Standards Manual)	
(F) Selected conveyance option(s) (choose from options in Technical Standards Manual)	
(G) Selected transition to ROW option(s) (choose from options in Technical Standards Manual)	

Flow Control

(1) Parent Lot Area (sf)	
(2) Allowable Impervious Surface Coverage (% from plat)	
(3) Allowable Square Footage of Impervious Surface Coverage (sf) $[(1) \times (2)]$	
(4) Total Proposed Roof Area on Parent Lot (sf)	
(5) Proposed Impervious Vehicular Surface Coverage (sf)	
(6) Proposed Other Impervious Surface Coverage on Parent Lot (sf)	
(7) Total Proposed Impervious Coverage Area (sf) $[(4) + (5) + (6)]$	
(8) Total Percent Impervious Coverage Area (% of Parent Lot Area) $[(7) / (1)]$	
Flow Control Required? (Flow Control is required if (8) exceeds (2))	
(If Flow Control is Required) Total Impervious Area Requiring Flow Control $[(6) - (3)]$, minimum 2000sf]	
(If Flow Control is Required) If impervious area is less than 500 sf, selected detention option(s) (choose from options in Technical Standards Manual).	
Is water quality required? (Answer "yes" if proposed impervious surface is at least 500 sf over that allowed and vehicular impervious surface is over 5000 sf).	

* Detention and water quality treatment for all development within the High Point Community will be reviewed based on the requirements within the Site Drainage Technical Standards rather than the Stormwater Code sections on detention and water quality.

* Data in column shall be specific to each parent lot. Add columns if application includes more than one parent lot.

Checklist

- ☐ Complete Permit Submittal Chart for Drainage Requirements for Undeveloped Lot.
- ☐ Provide site plan with existing and proposed impervious surfaces, buildings and roof outlines.
- ☐ Provide grading plan with existing and proposed contours.
- ☐ Indicate proposed roof area to be piped. Hatch or shade on plan.
- ☐ Indicate proposed connection location and type from piped downspouts to designated discharge point on plan.
- ☐ Indicate proposed location and type of conveyance from remaining downspouts to designated discharge point on plan.
- ☐ Indicate proposed locations and transition options where runoff crosses sidewalk or vehicular area on plan.
- ☐ Indicate non-piped downspouts serving over 1750 sf of roof area and provide calculations for conveyance and transition to ROW from a professional civil engineer.

Plat of High Point Community
Permit Submittal Chart for Drainage Requirements

Modification of Developed Lots

DPD No. _____

Block Number	
Parent Lot Number	

Discharge Point and Method of Connection for Roof Downspouts

(A) Designated Public Drainage Control Systems(s) (from Plat)	
Site drains to the discharge point at 1% slope or greater? (If no, drainage may be piped to PSD (per section 3 of Site Drainage Technical Standards and Paragraph B on Sheet 23b of the Plat))	
(B) Total Roof Area (new plus existing) (sf)	
(C) Allowable Percentage of Roof Area that may be Piped to the Discharge Point (% from plat)	
(D) Proposed Percentage of Roof Area to be Piped to the Discharge Point (%) (round to nearest 5%)	
(E) Existing downspout option(s)	
(F) Existing conveyance option(s)	
(G) Existing transition to ROW option(s)	
(H) Proposed changes to downspout option(s) (chose from options in Technical Standards Manual)	
(I) Proposed changes to conveyance option(s) (chose from options in Technical Standards Manual)	
(J) Proposed changes to transition to ROW option(s) (chose from options in Technical Standards Manual. Write "none" if slope is less than 8%)	

Flow Control

(1) Parent Lot Area (sf)	
(2) Allowable Impervious Surface Coverage (% from plat)	
(3) Allowable Square Footage of Impervious Surface Coverage (sf) $[(1) \times (2)]$	
(4) Total Existing Impervious Surface Coverage on Parent Lot (sf)	
(5) Total Proposed Replaced Impervious Surface Coverage on Parent Lot (sf)	
(6) Total Proposed New Impervious Surface Coverage on Parent Lot (sf)	
(7) Total Proposed Impervious Surface Coverage on Parent Lot (sf) $[(4) + (6)]$	
(8) Total Proposed Impervious Surface Coverage (% of Parent Lot) $[(6)/(1)]$	
(9) Total Percent Impervious Area (% of Parent Lot Area) $[(7)/(1)]$	
Flow Control Required? (Flow Control is required if (8) exceeds (2))	
(If Flow Control is Required) Total Impervious Area Requiring Flow Control $[(7)-(3)]$, minimum 2000sf]	
(If Flow Control is Required) If impervious area is less than 500 sf, selected detention option(s) (chose from options in Technical Standards Manual).	
Is water quality required? (Answer "yes" if total impervious surface is at least 500 sf over that allowed and vehicular impervious surface is over 5000 sf).	

* Detention and water quality treatment for all development within the High Point Community will be reviewed based on the requirements within the Site Drainage Technical Standards rather than the Stormwater Code sections on detention and water quality.

* Data in column shall be specific to each parent lot. Add columns if application includes more than one parent lot.

Checklist

- ☐ Complete Permit Submittal Chart for Drainage Requirements for Modification of Developed Lot.
- ☐ Provide site plan with existing and proposed impervious surfaces, buildings and roof outlines.
- ☐ Provide grading plan with existing and proposed contours.
- ☐ Indicate proposed roof area to be piped. Hatch or shade on plan.
- ☐ Indicate proposed connection location and type from piped downspouts to designated discharge point on plan.
- ☐ Indicate proposed location and type of conveyance from remaining downspouts to designated discharge point on plan.
- ☐ Indicate proposed locations and transition to ROW options where runoff crosses sidewalk or vehicular area on plan.
- ☐ Indicate non-piped downspouts serving over 1750 sf of roof area and provide calculations for conveyance and transition to ROW from a professional civil engineer.